Effective on 12/08/2004.	**Complete if Known**	
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).	Application Number	**10/020,299 – Conf. #8259**
FEE TRANSMITTAL	Filing Date	**December 7, 2001**
	First Named Inventor	**Tatu YLONEN**
For FY 2006	Examiner Name	**Jeffrey D. Popham**
☐ Applicant claims small entity status. See 37 CFR 1.27	Art Unit	**2137**
TOTAL AMOUNT OF PAYMENT ($) **0.00**	Attorney Docket No.	**35997-215657**

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

X Deposit Account   Deposit Account Number: 22-0261   Deposit Account Name: **Venable LLP**

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

X Charge fee(s) indicated below   ☐ Charge fee(s) indicated below, **except for the filing fee**

X Charge any additional fee(s) or underpayment of fee(s) under 37 CFR 1.16 and 1.17   **X** Credit any overpayments

FEE CALCULATION (All the fees below are due upon filing or may be subject to a surcharge.)

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

	FILING FEES		SEARCH FEES		EXAMINATION FEES		
Application Type	Fee ($)	Small Entity Fee ($)	Fee ($)	Small Entity Fee ($)	Fee ($)	Small Entity Fee ($)	**Fees Paid ($)**
Utility	300	150	500	250	200	100	_____
Design	200	100	100	50	130	65	_____
Plant	200	100	300	150	160	80	_____
Reissue	300	150	500	250	600	300	_____
Provisional	200	100	0	0	0	0	_____

2. EXCESS CLAIM FEES

Fee Description	Fee ($)	Small Entity Fee ($)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee ($)	Fee Paid ($)	Multiple Dependent Claims	
_____ - 20 =	_____	x _____ =	_____	Fee ($)	Fee Paid ($)

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims	Extra Claims	Fee ($)	Fee Paid ($)
_____ - 3 =	_____	x _____ =	_____

HP = highest number of total claims paid for, if greater than 3.

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee ($)	Fee Paid ($)
_____ - 100 =	_____	/50 _____ (round up to a whole number) x	_____ =	_____

4. OTHER FEE(S)

Fees Paid ($)

Non-English Specification, $130 fee (no small entity discount)

Other (e.g., late filing surcharge): _____   _____

SUBMITTED BY

Signature	*[signature]*	Registration No. (Attorney/Agent)	**42,709**	Telephone	**(202) 344-4000**
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#831400

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: Tatu Ylonen	Art Unit: 2137
Application No: 10/020,299	Examiner: POPHAM, JEFFREY D
Confirmation No: 8259	Atty. Docket No: 35997-215657
Filed: December 7, 2001	
For: APPLICATION GATEWAY SYSTEM, AND METHOD FOR MAINTAINING SECURITY IN A PACKET-SWITCHED INFORMATION NETWORK	Customer No: 26694 PATENT TRADEMARK OFFICE

AMENDED BRIEF IN RESPONSE TO
NOTIFICATION OF NON-COMPLIANT APPEAL BRIEF

MS Appeal Brief - Patents
Commissioner for Patents
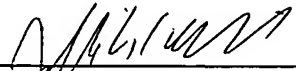P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the Notification of Non-Compliant Appeal Brief dated February 15, 2007, a copy of which is attached hereto, Applicants submit this Response to Notification of Non-Compliant Appeal Brief.

In accordance to MPEP 1205.03(B), a replacement summary of the claimed subject matter as required by 37 CFR 41(c)(1)(v) has been submitted with this paper.

Favorite reconsideration of the Appeal Brief is respectfully requested.

Dated:

Respectfully submitted,

By _____

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V. SUMMARY OF CLAIMED SUBJECT MATTER – 37 C.F.R. § 41.37(c)(1)(v)

A. Features of the Invention

A method and system for handling data packets at a logical borderline that separate an untrusted packet-switched information network from a protected domain in an efficient and secure manner is provided.

The conventional way of protecting a protected domain against hostile attacks from an insecure external information network is to route all data packets transmitted therebetween through a so-called firewall. A conventional a firewall may utilize a packet processor, which filters packets on the basis of the packet header information depending on a set of filtering rules defined by the network supervisor. Alternatively, a firewall may utilize an application gateway, which monitors the packets on the basis of their compliance with a certain protocol in order to decide whether a certain connection proceeds according to that protocol.

A packet processor is fast, but inefficient in filtering undesired packets. An application gateway, on the other hand, is effective in detecting and filtering undesired packets, but requires a great deal of computational effort which can cause delay in processing the packets. The present application describes a system and method that provides the level of security of an application gateway while avoiding the long delays typically caused by the application gateway. Such is achieved by providing a packet processor as well as an application gateway within a firewall computer, where the packets are first examined by the packet processor, which examines the packets to determine if they are associated with the certain protocol that the protocol-specific application gateway handles and, if so, redirects those packets to the application gateway for processing. As a result, the application gateway only those packets that are associated with its protocol and the packet processor processes all the other packets. Accordingly, the firewall benefits from the security of the application gateway without undue delays in processing unassociated packets.

The packets can be directed from the packet processor to the application gateway in a variety of signaling schemes. One embodiment of the present invention utilizes NATting (Network Address Translations), which is a method generally known in the art.

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In NATting, the destination information field of the packet is replaced with the address of the application gateway, so that the packet is redirected to the application gateway. Since the NATted packet received by the application gateway no longer contains the original destination address of the packet, such information is signaled from the packet processor to the application gateway. The application gateway then uses the original destination address along with the packet to process the packet.

Instead of replacing the original destination address with the address of the application gateway, in another embodiment of the present invention, the address of the application gateway is prepended as a separate header to the packet at the packet processor and used to direct the packet to the application gateway. Thereafter, the prepended header is stripped from the packet and the packet is processed at the application gateway.

B. The Independent Claims on Appeal – Claims 1, 39, 41, 43, 47, 51, 53, 62, 64, 66, 68, 69, 71 and 73

The following explanation of the claimed subject matter, with reference to the specification and drawings of the instant application, is by way of example and for explanation only. The invention is not limited to the disclosed embodiments, and certain elements may be found in more than one of the disclosed embodiments.

Claim 1 recites a method for handling digital data packets at a logical borderline 103 (i.e. a firewall device) that separates an untrusted packet-switched information network 101 (e.g. the internet) from a protected domain 102 (i.e. a private packet-switched information network), as depicted in FIG. 1. The logical borderline includes a packet processor 110 and an application gateway 111. Please see FIG. 1 and page 8, lines 1-9. The method of claim 1 comprises the steps of intercepting a packet that is in transit between the untrusted packet-switched information network 101 and the protected domain 102 at the packet processor 110 and examining the packet at the packet processor 110 to determine whether it contains digital data that pertains to a certain protocol. Please see FIG. 2, page 8, lines 20-28, and page 9, line 18 through page 10, line 17. If the packet does not contain digital data that pertain to the certain protocol, the packet processor 110 processes the packet. Id. However, if the packet contains digital data that

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pertain to the certain protocol, the packet is redirected to an application gateway part 111 and processed there according to a set of processing rules based on obedience to the certain protocol. Id. Claim 1 also recites a limitation that the packet processor 110 is a kernel mode process running in a computer device and the application gateway 111 is a user mode process running in a computer device. Please see page 8, line 34 to page 9, line 14.

Claim 39 recites features similar to claim 1, except that it recites in more detail the process of redirecting the packet from the packet processor 110 to the application gateway 111 according to one embodiment of the present invention. A recited in claim 39, if the packet contains digital data that pertain to a certain protocol, the original value of a certain destination information field within the packet is replaced with a replacement value that identifies an application gateway part as the destination of the packet, and redirecting the packet to the application gateway part 111. Please see page 6, lines 21-27. The packet processor 110 then indicates to the application gateway 111 the original value of the destination information field found in the packet at the moment of intercepting the packet at the packet processor part. Finally, the indicated original value of the destination information field is used at the application gateway 111 in processing the packet according to a set of processing rules based on obedience to its certain protocol. Please see page 6, line 29 – page 7, line 1 and page 14, line 29 – page 15, line 2. Also, unlike claim 1, claim 39 does not recite the packet processor 110 being a kernel mode process and the application gateway 111 being a user mode process.

Claim 41 also recites features similar to claim 1, except that it recites the process of redirecting the packet from the packet processor 110 to the application gateway 111 according to the second embodiment of the present invention. As recited in claim 41, if the packet contains digital data that pertain to a certain protocol, a header is prepended to the packet at the packet processor 110, the prepended header containing a value that identifies an application gateway 111 as the destination of the packet, and the packet is redirected to the application gateway 111. Pleas see page 17, lines 10-16. The prepended header is then stripped from the packet at the application gateway 111 and the original value of the destination information field in the packet is used at the application gateway 111 in processing the packet according to a set of processing rules based on obedience to

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its certain protocol. Please see page 17, lines 16-21. Also, similar to claim 39, claim 41 does not recite the packet processor 110 being a kernel mode process and the application gateway 111 being a user mode process.

Claim 43 and 47 includes limitations similar to claim 39 and 41, respectively, but recite "a method for handling digital data packet at a *packet processing entity* located at a logical borderline ..." (emphasis added). Similarly, claim 51 includes limitations similar to claim 39, but recites "a method for handling digital data packet at an *application gateway entity* located at a logical borderline ..." (emphasis added).

Claim 53 includes feature similar to claim 1 recited in the form of system. Similarly, claims 62, 64, 66, 68, 69, 71 and 73 variously include features similar to claims 1, 39, 41, 43 or 47, recited in form of a system, device, or software program product.